

SPOTLIGHT ON MARYLAND



Maryland Employment in Health Care

As health care costs have increased, so has employment in the health care sector and related industries. In general, these have been good jobs, with good wages and salaries. However, labor is an important component of health care costs. As a result, rapid growth in employment related to health care has important implications for other sectors of the economy nationally and in Maryland, as employers and consumers struggle to maintain health insurance benefits and afford greater direct costs for care.

Nationwide, health care accounts for nearly 14 percent of gross domestic product (GDP) and an even larger share of expenditures for personal consumption.¹ In Maryland also, health care expenditures represent a significant component of the economy and, in turn, a significant share of employment in the state.² This Spotlight examines levels and trends in employment in Maryland associated with the production of health care services and the occupational composition of the workforce that provides health care services. It is part of a series of reports that look at factors that contribute to growth in health care costs in Maryland.

Employment in health care and related industries

In 2004, the production of health care services and products

related to health care accounted for at least 12.8 percent of total employment in Maryland (Table 1). This number excludes employment in many industry groups (such as biosciences research and retail drugstores and sundries) that are not easily parsed into employment directly related to health care services. Most health care employment—11.9 percent of total employment—was engaged in the production of health care services; the balance was engaged in manufacturing, wholesale trade of medical, dental, hospital, or ophthalmic products, or health and medical insurance. Maryland's employment in health care services is greater than the national average (11.1 percent), but in recent years it has trended toward the national average—growing 7.5 percent from 2001 to 2004, compared to national average growth of 7.9 percent.

Much of the higher rate of employment in health care services in Maryland is related to greater employment in hospitals. In 2004, hospital employment accounted for 4.5 percent of total employment in Maryland and about 38 percent of health services employment. This compares with hospital employment at 3.9 percent of total employment and about 35 percent of health services employment nationally.

Table 1: Private-Sector Employment in Selected Health Care-Related Industries in Maryland in 2004, and Percent Change 2001-2004

Industry Group	MARYLAND			UNITED STATES		
	Total employment in 2004 (in thousands)	Percent of total employment	Percent change 2001-2004	Total employment (in thousands)	Percent of total employment	Percent change 2001-2004
TOTAL, SELECTED HEALTH CARE-RELATED INDUSTRIES	258.8	12.8%	7.8%	13,113.9	12.1%	7.3%
SERVICE PROVIDING INDUSTRIES						
Health care services	239.6	11.9%	7.5%	11,994.4	11.1%	7.9%
Ambulatory health care services	90.7	4.5%	7.9%	4,937.5	4.6%	10.9%
Hospitals	89.9	4.5%	8.6%	4,246.7	3.9%	6.0%
Nursing and residential care facilities	59.0	2.9%	5.4%	2,810.2	2.6%	5.7%
MANUFACTURING						
Medical equipment and supplies	2.2	0.1%	11.8%	301.8	0.1%	-3.0%
Pharmaceutical and medicine	5.2	0.3%	9.2%	287.2	0.3%	2.3%
WHOLESALE TRADE						
Medical, dental, and hospital equipment and supplies merchants wholesalers	4.1	0.2%	20.0%	168.2	0.2%	11.3%
Ophthalmic goods wholesalers	0.2	0.0%	-17.0%	20.0	0.0%	-3.0%
INSURANCE CARRIERS AND RELATED ACTIVITIES						
Direct health and medical insurance carriers*	7.4	0.4%	9.8%	342.3	0.3%	1.1%

Source: U.S. Department of Labor, Bureau of Labor Statistics, Quarterly Census of Employment and Wages (<http://www.bls.gov/cew/home.htm>).

Note: Industries are NAICS categories. Because the data are derived from a census, all differences are statistically significant. Percent changes are total, not annualized.

*Excludes life insurance carriers that offer health coverage.

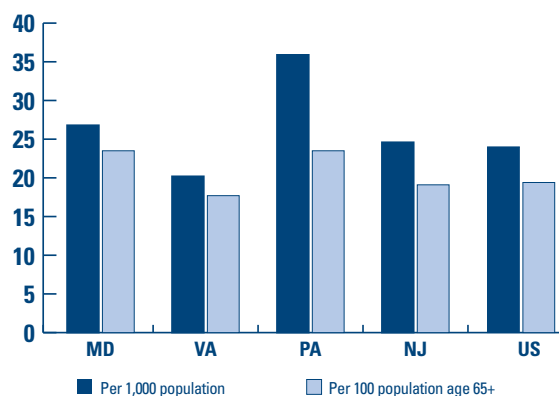
While total employment in the delivery of health care services in Maryland grew more slowly than the national average from 2001 to 2004, hospital employment in Maryland has grown much faster. This mirrors fast growth in spending for inpatient and outpatient hospital care in Maryland.³ From 2001 to 2004, hospital employment in Maryland grew 8.6 percent, compared to the national average of 6.0 percent. In contrast, employment in ambulatory care (approximately equal to the national average as a share of total employment in 2004) grew much more slowly than the national average from 2001 to 2004—by 7.9 percent in Maryland, compared to 10.9 percent nationally. Total hospital spending provided to Maryland residents increased during that period by approximately 29 percent.

Compared with the delivery of health care services in Maryland, employment in manufacturing and wholesale trade related to health care accounts for many fewer jobs, but it has grown very fast since 2004. Employment in these sectors may be associated not only with health care in Maryland, but also with regional and national delivery of health care. From 2001 to 2004, employment in pharmaceutical manufacturing in Maryland increased 9.2 percent, and employment in manufacturing of medical equipment and supplies increased nearly 12 percent. Employment in wholesale trade of medical, dental, and hospital equipment and supplies increased 20 percent.

Employment in health care services accounts for a larger share of the workforce in Maryland than in some neighboring states (Virginia and Delaware), but less than in Pennsylvania (Table 2). It is about comparable to that in New Jersey. Much of the difference in health services employment relates to employment in hospital care, as well as in nursing and residential care facilities.

In Virginia, hospital employment accounts for 3.3 percent of the workforce (compared to 4.5 percent in Maryland), and employment in nursing and residential care facilities accounts for 2.0 percent (compared to 2.9 percent in Maryland). In Pennsylvania, employment in both sectors is much greater than in Maryland, but the average age of the population in Pennsylvania is higher and the use of hospital and nursing facilities is greater. Relative to the population over age 65—a rough adjustment for greater use associated with population age—employment in hospitals and nursing facilities in Maryland is greater than the U.S. average or in New Jersey or Virginia, and about the same as in Pennsylvania (Figure 1).

Figure 1: Hospital Employment Per Resident Population and Per Population Age 65 and Over in 2004: Maryland, U.S., and Selected Comparison States



Source: U.S. Census Bureau.

Table 2: Private-Sector Employment in Health Care Industries as a Percentage of Total Private Employment in 2004: Maryland and Selected Comparison States

Industry Group	MD	DE	VA	NJ	PA
TOTAL, SELECTED HEALTH CARE-RELATED INDUSTRIES	12.8%	11.4%	9.9%	13.6%	15.8%
SERVICE PROVIDING INDUSTRIES					
Health care services	11.9%	10.4%	9.3%	11.4%	14.2%
Ambulatory	4.5%	4.1%	4.0%	4.9%	4.9%
Hospitals	4.5%	4.4%	3.3%	4.2%	5.4%
Nursing and residential care facilities	2.9%	1.9%	2.0%	2.3%	3.9%
MANUFACTURING					
Medical equipment and supplies	0.1%	0.3%	0.1%	0.4%	0.4%
Pharmaceutical and medicine	0.3%	0.2%	0.1%	1.2%	0.5%
WHOLESALE TRADE					
Medical, dental, and hospital equipment and supplies merchants wholesalers	0.2%	0.0%	0.1%	0.2%	0.2%
Ophthalmic goods wholesalers	0.0%	0.0%	0.0%	0.1%	0.0%
INSURANCE CARRIERS AND RELATED ACTIVITIES					
Direct health and medical insurance carriers ^a	0.4%	0.5%	0.3%	0.3%	0.6%

Source: U.S. Department of Labor, Bureau of Labor Statistics, Quarterly Census of Employment and Wages (<http://www.bls.gov/cew/home.htm>, accessed March 2, 2006).

Note: Industries are NAICS categories. Because the data are derived from a census, all differences are statistically significant. Detail may not add to total, due to rounding.

^a Excludes life insurance carriers that offer health coverage.

Employment in health insurance also appears to have grown faster than the national average in Maryland from 2001 to 2004. However, because available data for this sector measure employment only in health companies—not employment in life insurance companies that also sell health insurance—they are more difficult to interpret. Some of the growth in employment reflects growth in the share of the market held by health companies (such as CareFirst, United Healthcare, and Kaiser) that report employment data as health insurers, versus companies that write health coverage but identify themselves as life carriers (such as Aetna). Health carrier employment in Maryland accounted for a larger share of total employment (0.4 percent) in 2004 than the national average (0.3 percent), and grew by nearly 10 percent from 2001 to 2004, compared to an increase of just 1.1 percent nationally.

From 2001 to 2004, Carefirst and MAMSI (now part of United HealthCare) expanded membership in Maryland and regionally, so some of the employment growth in this sector may reflect regional growth. It may also reflect increased demand for clinical management and information technology that would have increased insurance-sector employment in all states. However, as employment in health insurance has increased, the administrative and net cost of insurance has increased as well. In Maryland, the administrative cost of private insurance, combined with other net costs (such as addition to surplus), increased at least 140 percent from 2001 to 2004, compared with 24-percent growth in privately insured expenditures for health care.⁴

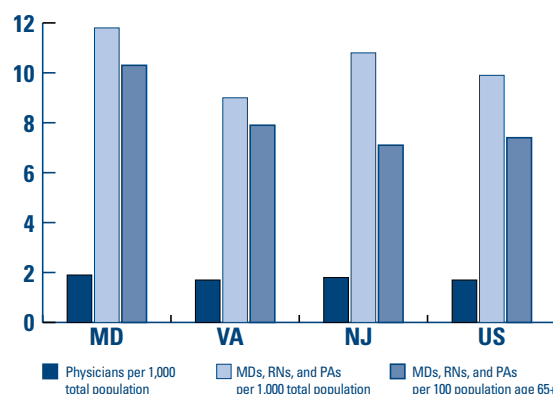
Employment in health care occupations

More than 183,000 workers in Maryland are employed directly in the delivery of health care services—a number that excludes workers who are employed in health care facilities but not engaged in direct patient care and workers in industries related to health care production (Table 3). In 2004, these workers accounted for 7.4 percent of total employment, approximately equal to the national average.

Compared to the national average, Maryland's mix of health care providers includes a greater proportion of higher-skilled professions: 70 percent are employed in health care practitioner or technical occupations (compared to 66 percent nationally), with the balance employed in health support occupations. Relative to the national average, Maryland's health care workforce includes higher percentages of physicians (5.6 percent versus 5.1 percent nationally), registered nurses (28.8 percent versus 24.4 percent nationally), and physician assistants (1.3 percent versus 0.7 percent nationally).⁵

Maryland's combined rate of physicians, registered nurses, and physician assistants is higher than in most neighboring states or the U.S. average (11.8 per 1,000 population, compared with 9.9 nationally and 9.0 in Virginia), but approximately equal to that in New Jersey (10.8). Adjusting for population age, Maryland has a greater supply of these direct-care professionals than any of the comparison states: 9.5 per 100 population age 65 or over, compared to 7.4 nationwide (Figure 2). Mirroring Maryland's greater use of more highly trained personnel in the production of health care, the ratio of pharmacists to pharmacist technicians in Maryland also is relatively high—although relative employment in both occupations combined is less than the national average or the average in other comparison states. In 2004, only New Jersey employed a higher ratio of pharmacists to pharmacy technicians, with pharmacists slightly outnumbering pharmacy assistants in the state.

Figure 2: Physicians, Registered Nurses, and Physician Assistants Per Total Resident Population and Per Population Age 65 and Over in 2004: Maryland, U.S., and Selected Comparison States



Source: U.S. Department of Labor and Census Bureau. Calculated from published estimates.

Discussion

Employment in health care industries and occupations in Maryland includes both a high supply of medical professionals relative to many other states and the national average, and an emphasis on use of highly trained professionals relative to health support professionals.

Maryland's higher employment in hospitals reflects greater use of inpatient and outpatient care relative to care provided in other settings. In turn, greater utilization of hospital care may be driven by provider preferences or insurer reimbursement that favors outpatient hospital care, for example, relative to care provided in physician offices. Also, as in other states, hospitals in Maryland are at the forefront for the delivery of care to the uninsured population. If the uninsured population's access to care in other settings declines and the number of uninsured increases, the delivery of care in hospital settings may continue to increase as well.⁶

While increased employment in health care offers significant economic benefits in Maryland, the growing cost of health care depresses employment in other sectors where employers offer health insurance benefits. On net, it may depress employment in the state. Therefore, as the demand for health care grows—reflecting advances in technology and changes in medical practice, coupled with population aging—it will be important for Maryland to consider ways to improve the productivity of employment in health care delivery and health insurance.⁷ Strategic use of Maryland's relatively abundant supply of registered nurses⁸ and renewed attention to training a greater supply of health and pharmaceutical technicians and support personnel may be important options to mitigate the growing cost of health care in Maryland. A strategy of replacing higher cost labor with lower cost labor is not new and has produced mixed results in the past due to quality concerns and tight labor markets in skilled medical technician fields. Greater use of nursing and medical technicians will require more attention to these occupations, particularly by expanding educational and career development opportunities.

Table 3: Employment in Selected Health Care Occupations in November 2004: Maryland, U.S., and Selected Comparison States

	MD	VA	PA	NJ	US
TOTAL EMPLOYMENT (IN THOUSANDS)	2,477.3	3,494.2	5,535.0	3,901.0	129,146.7
Total health care employment ^a	183.1	218.5	483.4	288.1	9,583.0
Percent of total employment	7.4%	6.3%	8.7%	7.4%	7.4%
OCCUPATIONAL GROUPS AS A PERCENT OF HEALTH CARE EMPLOYMENT:					
Total health care practitioner and technical employment	70.3%	69.6%	67.1%	65.5%	66.2%
Physicians ^b	5.6%	5.8%	4.9%	5.5%	5.1%
Primary care physicians ^c	2.5%	2.4%	2.5%	2.2%	2.2%
Registered nurses	28.8%	35.4%*	na	27.1%	24.4%*
Physician assistants	1.3%	0.4%*	na	0.2%*	0.7%
Pharmacists	2.2%	2.4%	2.3%	2.6%*	2.4%
Pharmacy technicians	2.4%	2.9%*	2.7%	2.4%	2.8%*
Total health care support employment ^d	29.7%	30.4%	32.9%	34.5%	33.8%

Source: U.S. Department of Labor, Bureau of Labor Statistics, Occupational Employment Statistics Survey (<http://www.bls.gov/oes/>, accessed March 2, 2006).

Note: "na" indicates that published detail is unavailable. Asterisk (*) indicates significant difference from Maryland with 95 percent confidence. Because standard errors for summary measures (such as total employment) are unavailable, tests of significant differences for these measures cannot be calculated.

^a Total health care employment equals the sum of health care practitioners and technical occupations and health care support occupations. Estimates exclude veterinarians, veterinary technologists and technicians, athletic trainers, and veterinary assistants and laboratory animal caretakers.

^b Estimated as the sum of published physician subgroups, including family and general practice physicians, obstetricians and gynecologists, general internists, pediatricians, and surgeons. Counts of physicians differ from the number of physicians in active practice in Maryland, based on licensure data. Tests of significant differences cannot be calculated for this measure.

^c Estimates include family and general practice physicians, general internists, obstetricians, gynecologists, and pediatricians. Tests of significant differences across states cannot be calculated for this measure.

^d Includes home health aides; nursing aides, orderlies, and attendants; psychiatrist aides; therapist aides and assistants; massage therapists; dental and medical assistants; medical equipment preparers; medical transcriptionists; pharmacy aides; and all other healthcare support workers. Estimate excludes veterinary assistants and laboratory animal caretakers.

¹ Gross domestic product is a measure of the size of the economy. It is equal to expenditures for goods and services produced domestically, plus net exports (exported goods and services minus imported goods and services). In 2006, personal health care expenditures are projected to reach 13.7 percent of GDP (Borger et al. 2006).

² MHCC estimates that personal health care spending totaled about 12 percent of Maryland's Gross State Product in 2004.

³ From 2003 to 2004, expenditures for inpatient and outpatient hospital care in Maryland grew 9 and 10 percent, respectively, while expenditures for physician services and other professional services increased 5 and 6 percent, respectively (MHCC 2006).

⁴ Estimate derived for health companies from public data reported to the Maryland Insurance Administration. Including life companies that also write health insurance, the net cost of insurance increased 219 percent from 2001 to 2004, as incurred claims (across all lines of business) increased 40 percent.

⁵ Statistics developed by the American Medical Association indicate that the supply of physicians in Maryland and in other states may be greater than indicated by the federal Bureau of Labor Statistics (BLS) survey estimates. The sample frame for the BLS survey is composed of firms that contribute to the federal Unemployment Insurance program. In Maryland and in other states, Unemployment Insurance does not cover sole proprietors and partnerships. Therefore, physicians employed in these types of businesses are excluded from the survey. In 2000, the BLS estimates appeared to undercount primary care physicians by about 7 percent.

⁶ Nationally, the percentage of physicians providing charity care declined to about 68 percent in 2004-2005, compared with more than 76 percent in 1996-1997 (Cunningham and May 2006).

⁷ Population aging, all else being equal, may account for very little of the increase in the demand for inpatient hospital care, in particular, over the next several decades. However, the elderly population's greater contact with the health care

system triggers other factors that drive much of the growth in health care costs—specifically, advancing medical technology and changing medical practice (Strunk et al. 2006).

⁸ In 2005, just 5.6 percent of active registered nurses in Maryland were in advanced practice—as nurse practitioners, nurse anesthetists, nurse midwives, or nurse psychotherapists (Maryland Nursing Board, personal communication).

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